REMARKS

Claims 1-3, 5-12, 14-23, and 25-29 are pending in the present application. Claims 2-5, 12-14, and 22-25 are cancelled. Claims 1, 8, 11, 17, 21, 26, 28, and 29 are amended. Support for these amendments may be found on at least page 10, lines 9-26, and page 13, lines 13-24. No claims are added. Reconsideration of the claims is respectfully requested.

I. 35 U.S.C. §103, Alleged Obviousness, Claims 1, 11, and 21

The Examiner has rejected claims 1-3, 5-12, 14-23, and 25-29 under 35 U.S.C. § 103(a) as being unpatentable over *Applicants' Allegedly Admitted Prior Art* (*AAAPA*) in view of *Smith et al.*, "Content-Based Transcoding of Images in the Internet," IBM, 1998 (hereinafter *Smith*). This rejection is respectfully traversed.

With regard to independent claim 1, the Examiner has stated:

> 5. As to claim 1, AAPA discloses the invention substantially as claimed, including a method of formatting (customizing) content data for presentation on a client device (510, fig. 5) (i.e., transcoding is the process of customizing data content . . . transcoding is performed for a variety of reasons including meeting the unique presentation requirements of a particular type of client device, specification, page 1, lines 9-21), comprising:
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> receiving a request for content data (i.e., HTTP Request, fig. 5; when a client device sends a content request to a server; specification, page 1, lines 22-23), the request having client device characteristic information (i.e., the request header includes information identifying the device type, user identification, passwords, URL requested, HTTP method used; specification, page 1, line 24 – page 2, line 8);
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> generating generic content data (i.e., content generator servlet, 540, fig. 5; the retrieved content is passed to a transcoding servlet, 550, fig. 5 as generic HTML; specification, page 2, lines 24-27); and
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> transcoding said generic content data to produce transcoded content data (i.e., transcoding servlet, 550, fig. 5; the transcoding servlet, 550, fig. 5 transcodes the generic HTML; specification, page 3, lines 1-3).
>
> 6. AAPA discloses transcoding said generic content data to produce transcoded content data (i.e., transcoding servlet, 550, fig, 5; the transcoding servlet, 550, fig. 5 transcodes the generic HTML; specification, page 1, lines 9-21; page 3, lines 1-3). However, AAPA does

> not specifically disclose storing the client device characteristic information; and transcoding said generic content data using said client device characteristic information. Smith discloses storing the client device characteristic information (Table 5; page 10, section 3.2. Client device characteristics); and transcoding said generic content data using said client device characteristic information (page 10, section 3.3. Transcoding policies; transcoding based upon image type and client device capabilities). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of AAPA and Smith because Smith's storing the information and transcoding would appropriately manipulate the requested content data in order to fit into the client.

(*Office Action*, dated June 7, 2005, pages 2-4).

Amended independent claim 1, which is representative of independent claims 11 and 21 with regard to similarly recited subject matter, reads as follows:

> 1. A method of formatting content data for presentation on a client device, comprising:
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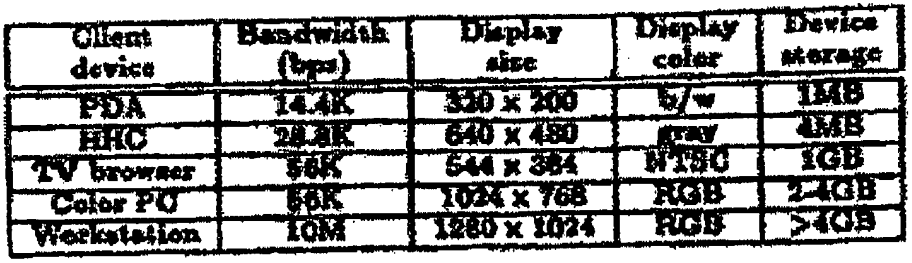
> receiving a request for content data, the request having client device characteristic information and identifying requested content data;
>
> storing, by the preamble servlet, the client device characteristic information in a data structure associated with the request;
>
> passing, by the preamble servlet, the client device characteristic information to a transcoding servlet;
>
> generating the requested content data to form the content data;
>
> matching the generic content data to the request; and
>
> transcoding, by the transcoding servlet, said content data using said client device characteristic information in the data structure associated with the request to produce transcoded content data.

The Examiner bears the burden of establishing a *prima facie* case of obviousness based on prior art when rejecting claims under 35 U.S.C. § 103. *In re Fritch*, 972 F.2d 1260, 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992). For an invention to be a *prima facie* obvious, the prior art must teach or suggest all claim limitations. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). The *Applicants' Allegedly Admitted Prior Art* and *Smith* references cited by the Examiner do not render obvious the present invention as recited in independent claims 1, 11, and 21 because the references fail to teach or suggest all claim limitations.

These rejected independent claims all recite a preamble servlet storing client device characteristic information in a data structure associated with the request, a preamble servlet passing client device characteristic information to a transcoding servlet, and a transcoding servlet transcoding using the client device characteristic information in the data structure associated with the request. Claim 1 includes the steps of a preamble servlet storing the client device characteristic information in a data structure associated with the request, the preamble servlet passing the client device characteristic information to a transcoding servlet, and the transcoding servlet transcoding said content data using said client device characteristic information in the data structure associated with the request to produce transcoded content data. A preamble servlet stores client device characteristic information in a data structure associated with a request, the preamble servlet sends client device characteristic information to a transcoding servlet, and a transcoding servlet transcodes using the client device characteristic information in the data structure associated with the request are features not taught or suggested in *Applicants' Allegedly Admitted Prior Art*, *Smith* or any of the other cited references.

Applicants' Allegedly Admitted Prior Art is directed towards transcoding as the process of customizing data content, but not transcoding based upon the stored client device characteristic information, as recited in claim 1 of the present invention. In the Office Action, the Examiner acknowledges that "AAPA does not specifically disclose storing the client device information," but alleges that in the following cited passage, *Smith* teaches storing client device characteristic information:

> The growing number of client devices that are gaining access to the Internet are varied in their communication, processing, storage and display capabilities. Table 5 illustrates some of the variability in device bandwidth, display size, display color and storage among devices.
>
> Since many devices are constrained in their capabilities, they cannot simply access image content as-is on the Internet. For example, many PDAs cannot handle JPEG images, regardless of size. The HHCs cannot easily display Web pages loaded with images because of screen size



Client device	Bandwidth (bps)	Display size	Display color	Device storage
PDA	14.4K	320 x 200	b/w	1MB
HHC	28.8K	640 x 480	gray	4MB
TV browser	56K	544 x 384	NTSC	1GB
Color PC	56K	1024 x 768	RGB	2-4GB
Workstation	10M	1280 x 1024	RGB	>4GB

Table 5: Summary of client device capabilities.

> limitations. Color PCs often cannot access image content quickly over dial-up connections. The presence of fully saturated red or white images causes distortion on NTSC TV-browser displays. The transcoder framework allows the content providers to publish content at the highest fidelity, and the system manipulates the content to adapt to the unique characteristics of the devices.

Smith, Table 5; page 4, section 3.2. Client device characteristics.

Applicants respectfully submit that not taking into account the context for the two incidents of the words "storage" in the above recitation resulted in the inaccurate allegation that *Smith* teaches storing client device characteristic information as recited in claim 1 of the present invention. *Smith* cites storage within the contexts of a "growing number of client devices that are . . . varied in their communication, processing, storage and display capabilities," and "Table 5 illustrates some of the variability in . . . storage among devices." Table 5 is explicit in its usage of the word storage, with one column listed under "Device storage." The storage that *Smith* discusses is the storage capacity of a device, such as a 1 GB (gigabyte) device for a TV browser, not the "storing, by a preamble servlet, the client device characteristic information in a data structure associated with the request," as recited in claim 1 of the present invention. Therefore, *Smith* does not teach or suggest a preamble servlet storing the client device characteristic information in a data structure associated with a request, as recited in claim 1 of the present invention.

In the Office Action, as cited above, the Examiner acknowledges that "AAPA does not specifically disclose . . . transcoding said generic content data using said client device characteristic information," but alleges that in the following cited passage *Smith* teaches transcoding said generic content data using said client device characteristic information:

> The transcoding system employs the transcoding functions in the transcoding policies. Consider the following example transcoding policies based on image type and client device capabilities:
>
> $$\begin{aligned} \mathbf{minify}(X) &\leftarrow \mathbf{type}(X) = \mathrm{CP},\ \mathbf{device} = \mathrm{HHC} \\ \mathbf{subsample}(X) &\leftarrow \mathbf{type}(X) = \mathrm{SCG},\ \mathbf{device} = \mathrm{HHC} \\ \mathbf{dither}(X) &\leftarrow \mathbf{type}(X) = \mathrm{CP},\ \mathbf{device} = \mathrm{PDA} \\ \mathbf{threshold}(X) &\leftarrow \mathbf{type}(X) = \mathrm{SCG},\ \mathbf{device} = \mathrm{PDA} \\ \mathrm{JPEG}(X) &\leftarrow \mathbf{type}(X) = \mathrm{GRP},\ \mathbf{bandwidth} \leq 28.8\mathrm{K} \\ \mathrm{GIF}(X) &\leftarrow \mathbf{type}(X) = \mathrm{GRG},\ \mathbf{bandwidth} \leq 28.8\mathrm{K} \end{aligned}$$
>
> Notice that two methods of image size reduction are employed: minify and subsample. The difference is that minify performs anti-aliasing filtering and subsampling. Minifying graphics often generates false colors during filtering, which increases the size of the file. This can be avoided by subsampling directly. We also distinguish between graphics and photographs for compressing and reducing the color of the images. For compression, JPEG works well for gray photographs but not for graphics. For GIF, the reverse is true. When converting color images to b/w, dithering the photographs improves their appearance, while simply thresholding the graphics improves their readability. By performing the image type content analysis, the system is able to better select the appropriate transcoding functions.
>
> The transcoding policies also make use of the image purpose analysis. Consider the following example transcoding policies:
>
> $$\begin{aligned} \mathbf{fullsize}(X) &\leftarrow \mathbf{purpose}(X) = \mathrm{MAP} \\ \mathbf{remove}(X) &\leftarrow \mathbf{purpose}(X) = \mathrm{ADV} \\ &\qquad \mathbf{bandwidth} \leq 14.4\mathrm{K} \\ \mathbf{substitute}(X, \text{"<li>"}) &\leftarrow \mathbf{purpose}(X) = \mathrm{BUL}, \\ &\qquad \mathbf{device} = \mathrm{PDA} \\ \mathbf{substitute}(X, t) &\leftarrow \mathbf{purpose}(X) = \mathrm{INF}, \\ &\qquad \mathbf{display\ size} = 320 \times 200 \end{aligned}$$
>
> The first policy makes sure that map images are not reduced in size in order to preserve the click focus translation. The second policy illustrates

> the removal of advertisement images if the bandwidth is low. The third policy substitutes the bullet images with the HTML code "<li>," which draws a bullet without requiring the image. A similar policy substitutes rule images with "<hr>". The last policy substitutes the information images, i.e., logos, icons, mastheads, with related text if the device screen is small.

Smith, pages 4-5, section 3.3. Transcoding policies.

While *Smith* teaches transcoding policies, none of these transcoding policies teach or even suggest "transcoding, by a transcoding servlet, said content data using said client device characteristic information in the data structure associated with the request," wherein said client device characteristic information is received in a request for content data and said client device characteristic information is stored and passed to a transcoding servlet, as recited in claim 1 of the present invention. *Smith* says it "manipulates and transcodes images, on the fly, to adapt them to the capabilities of the client devices." This general teaching may be achieved in many ways. *Smith* does not teach any specific steps to achieve this goal. Rather, as discussed in the Abstract, *Smith* focuses on a system that "utilizes transcoding policies based on content classes." Despite the absence in *Smith* of transcoding generic content data using client device characteristic information in a data structure associated with a request, the Examiner relies on *Smith*, not the *Applicants' Allegedly Admitted Prior Art*, to teach this feature. The *Applicants' Allegedly Admitted Prior Art* indicates that after the client device characteristic is passed to (not stored by) the content generator process, it "is not passed on to subsequent steps in the remaining output path on the way to the requesting device, such as to the transcoding mechanism." (Specification, page 2, lines 5-8).

In fact neither *Smith* nor *Applicants' Allegedly Admitted Prior Art* mention storing the client device characteristic information in a data structure associated with the request. Although *Applicants' Allegedly Admitted Prior Art* teaches that the client device characteristic information is passed by a web server to a servlet engine to invoke a content generator servlet, the client device characteristic information is never stored for use by "subsequent steps in the remaining output path on the way to the requesting device, such as to the transcoding mechanism." (Specification, page 2, lines 6-8).

The Examiner further states on page 4 of the Office Action that it would be obvious to combine *Applicants' Allegedly Admitted Prior Art* with *Smith* to arrive at the features of the claimed invention. However, *Smith* does not cure the deficiencies in *Applicants' Allegedly Admitted Prior Art*. As discussed above, *Smith* is directed towards a system that "utilizes transcoding policies based on content classes," not based upon client device characteristic information in a data structure associated with a request, as recited in claim 1 of the present invention. *Smith* teaches "real-time, on-line transcoding" based upon image features that are "extracted only as needed for the tests in order to minimize processing. The image features are derived from several color and texture measures computed from the images." (*Smith*, page 2, § 2.1. Image type classification). *Smith* does not teach or suggest a preamble servlet storing client device characteristic information in a data structure associated with a request or a transcoding servlet using client device characteristic information in a data structure associated with a request for transcoding content data, as recited in claim 1 of the present invention.

Even if *Applicants' Allegedly Admitted Prior Art* were combinable with *Smith*, the result of such a combination would not be the invention as recited in independent claim 1. Rather, such an alleged combination would, at best, result in a transcoding system, substantially as taught in *Applicants' Allegedly Admitted Prior Art*, with the content images tested and transcoded in the manner described in *Smith*. Even with the alleged additions of *Applicants' Allegedly Admitted Prior Art* and *Smith*, there would be no ability for the storing of client device characteristic information or for using the client device characteristic information to produce transcoded content data as recited in claim 1 of the present invention.

As an additional reason for rejecting claim 21, the Examiner indicates that the *Applicants' Allegedly Admitted Prior Art* discloses "a computer program product . . . for formatting content data for presentation on a client device. . . and displaying content data on said client device" (*Office Action*, dated June 7, 2005, page 7). The Office Action fails to take into account not only the feature in claim 21 that specifies instructions for storing the client device characteristic information, but also the limitation specifying the computer program product's instructions for transcoding the content data using the client device characteristic information to produce transcoded data. As discussed above, unique features of the present invention include the preamble servlet storing client device characteristic information in a data structure associated with a request and a transcoding servlet using client device characteristic information in the data structure associated with the request to transcode content data for presentation on a particular client device. Because the combination of *Applicants' Allegedly Admitted Prior Art* and *Smith* lacks this feature, it does not render the features in claim 21 obvious.

In view of the above, Applicants submit that independent claims 1, 11, and 21 are not taught or suggested by the alleged combination of *Applicant's Allegedly Admitted Prior Art,* and *Smith*. Claims 6-7 and 9-10 are dependent claims depending on independent claim 1, claims 15-16 and 18-20 are dependent claims depending on claim 11, and claims 26-27 and 29 are dependent claims depending on independent claim 21. (Claim 9 is directly dependent on dependent claim 7, which is dependent on independent claim 1. Claim 18 is directly dependent on dependent claim 16, which is dependent on independent claim 11.) Applicants have already demonstrated claims 1, 11, and 21 to be in condition for allowance. Applicants respectfully submit that claims 6-7, 9-10, 15-16, 18-20, 26-27 and 29 are also allowable, at least by virtue of their dependency on allowable claims. Accordingly, Applicants respectfully request withdrawal of the rejection of independent claims 1, 6-11, and 15-21, and 26-29 under 35 U.S.C. §103.

II. <u>35 U.S.C. §103, Alleged Obviousness, Claims 8, 17 and 28</u>

With regard to dependent claim 8, the Examiner has stated, "As to claim 8, it is rejected for the same reasons set forth in claim 1 above." (*Office Action*, dated June 7, 2005, page 5). Amended dependent claim 8, which is representative of independent claims 17 and 28 with regard to similarly recited subject matter, reads as follows:

> 8. The method of claim 1, wherein the step of storing, by the preamble servlet, the client device characteristic information in a data structure associated with the request and the step of generating the requested content data to form generic content data are performed concurrently.

As discussed above, the combination of *Applicants' Allegedly Admitted Prior Art* and *Smith* does not teach or suggest a preamble servlet storing client device characteristic information in a data structure associated with the request. Because the combination of *Applicants' Allegedly Admitted Prior Art* and *Smith* does not teach or suggest a preamble servlet storing client device characteristic information in a data structure associated with the request, the combination of *Applicants' Allegedly Admitted Prior Art* and *Smith* cannot teach or suggest a preamble servlet storing client device characteristic information in a data structure associated with the request concurrently with the step of generating the requested content data to form generic content data. Therefore, the combination of Applicants' *Allegedly Admitted Prior Art* and *Smith* does not render claims 8, 17 or 28 obvious.

Additionally, claim 8 is a dependent claim depending on independent claim 1, claim 17 is a dependent claim depending on claim 11, and claim 28 is a dependent claim depending on independent claim 21. Applicants have already demonstrated claims 1, 11, and 21 to be in condition for allowance. Applicants respectfully submit that claims 8, 17, and 28 are also allowable, at least by virtue of their dependency on allowable claims.

III. Conclusion

It is respectfully urged that the subject application is patentable over the cited references and is now in condition for allowance.

The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

DATE: September 7, 2005

Respectfully submitted,

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